

# Flight

First Aero Weekly in the World.

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport.

OFFICIAL ORGAN OF THE AERO CLUB OF THE UNITED KINGDOM.

No. 45. Vol. I.]

NOVEMBER 6TH, 1909.

[Registered at the G.P.O.  
as a Newspaper.]

[Weekly, Price 1d.,  
Post Free, 1½d.]



FLIGHT AT BROOKLANDS AUTOMOBILE CLUB RACING TRACK.—Paulhan, on his Farman biplane, flying high towards the grand stands on Saturday last. Note the floods up to the edge of the paddock.

"Flight" Copyright Photo.

## THE FUTURE—AND A WARNING.

INVENTORS of all classes bemoan a difficulty in obtaining that financial support which alone will enable them to put their ideas into practical form. Capitalists, according to them, are cold, calculating, sceptical fellows who will not part with their money until they are assured of a definite return—and sometimes not even then. The capitalist, on the other hand, says that where one inventor may have an idea that is worthy of exploitation there are a thousand who are either quite impossible visionaries or equally impossible rogues. Well, the outsider, with neither the brains of the one nor the shekels of the other, can see eye to eye with both, and can realise the difficulties of each. The inventor is habitually regarded with a certain amount of suspicion, if only for the reason that he seeks monetary aid, and the one man who has marketable value to offer in return for assistance must suffer with his thousand unprovided brothers.

Inventions are regarded with as much scepticism as inventors, and the very word is sufficient to cause a smile in almost any company, but in no instance is the cheap scorn of the ignorant more manifest than when the invention has even the remotest connection with a flying machine. So very recently the possibility of human flight was still a dream, as far as the public was concerned, that the old doubts have not yet quite passed away. It is bad for the *bona fide* genius that the profession of invention, if one may use the term, should be so discredited, but just as there's a silver lining to the cloud, so the situation has its saving points.

The beginnings of the automobile industry were dogged by a determined bird of prey that used its best endeavours to pick the bones while yet its victim lived. The bird was named the wild-cat company promoter, but the victim, rescued from his clutches, lived in spite of him. For a while the ill-omened harbinger of financial doom flourished mightily, principally, no doubt, because the public, in the first flush of enthusiasm, was simply waiting to be gulled. But then the motor car was tangible and comprehensible, even while it only ran by fits and starts, while the flying machine is—or was until quite lately—an incredible thing, the "wireless" of locomotion—a machine which is supported upon an invisible medium, where the motor car runs along the hard and obvious high road. So automobilism offered opportunities of speculation which are not evident in aviation, and we may congratulate ourselves that up to the present the very caution and suspicion that to a certain extent has delayed progress have guarded the infant industry from the unwelcome attentions of this class of company promoter.

Those who have the best interests of the movement at heart are ever watching for future developments, and it was with some foreboding that the effects of such flying successes as attended the Rheims meeting were awaited. Cause for alarm was given by the Blackpool and Doncaster meetings in this connection, and it is, perhaps, just as well that these events were not so completely successful as to immediately popularise the "sport" of flying, and so invite a sudden rush of eager speculation. No worse fate could befall the movement, especially at the present juncture, than that its struggles to gain a footing should be hampered by the ill-judged and over-capitalised flotations that weighed down the youthful motor trade.

We say with feeling, therefore, and not without some little knowledge, that those who profess themselves well-

wishers of the aeronautical industry will do their utmost to preserve the sound basis upon which it rests at present. The speculator of the professional type who seeks for means of self-enrichment in every turn of life cannot be blamed if he trades upon the gullibility of the public, for his is a selfishness that is magnificent in its comprehensiveness, and as a general thing he does not seek to hide behind a mask of philanthropic disinterestedness. Thus, against the danger presented by this type we are, in some measure, forearmed, and if his ends are gained in spite of us, we can but blame the innate foolishness of those who lend the support of name and funds to schemes they do not fully comprehend. But it is not the open self-acknowledged enemy from whom we have the most to fear. It is the possible traitor in the camp of aviation who may be the greatest foe.

The sudden birth of aero clubs throughout the country proves that behind a calm and careless exterior runs a strong current of interest in the problems of the air, and even this so-called conservative, unready England of ours is able to put into the field quite a number of promising designs for aeroplanes of one type and another. This fact, however, is one that must be read with characteristic British caution, for at the same time that the slightest encouragement has brought forth, say, a score of legitimate machines, some complete, others in model form, and yet others not beyond the paper stage, so the sun has shone upon a host who, with no knowledge of the simplest elements of aviation, still seek to rush in upon the rising tide of prosperity.

Discrimination is difficult for the uninitiated investor, who might, indeed, with a sudden change of front, fail to recognise the wild-cat nature of some of the schemes that may be brought before him. He has as much reason to be wary of the impractical inventor as of the company promoter himself. Still, it is important that the pitfalls which await his faltering footsteps should not have the effect of frightening him of the whole breed of aeroplane inventors, for there are many among them who are worthy of support. There are, doubtless, numerous clever brains at work on problems that have either actually been solved or else proved useless for the purposes of flight. They devote their energies to a profitless task for the lack of the few pounds with which to purchase records of past experiments, failures and successes, when the same keen enthusiasm in the cause might conceivably perform much useful work were the intellect behind it properly directed.

It must be clear, therefore, that money is much needed, but that the money must be suitably applied if good is to result. One might suggest a hundred ways in which assistance could be given—to the struggling inventor, for instance, who, by reason of his straitened circumstances, is unable to complete the machine with which, in his eyes, the world is to be conquered, and so he cannot try for any of the various prizes that are offered to refill his purse. But always natural optimism, although in some degree permissible, must be discounted, and the merits of the scheme inquired most closely into. And always in the background the sinister shape of the company promoter lies in wait for opportunities. There in the background must he stay at any cost if the cause of aviation is to be saved from the fate that so nearly overtook its sister industry.

For that reason we once more raise this warning note against any such exploitations which may be in the air.



## FLIGHT PIONEERS.



MR. J. T. C. MOORE-BRABAZON.

## FLIGHT PIONEERS.

MR. J. T. C. MOORE-BRABAZON.

PROUD as he naturally is of the distinction of being the first Englishman to fly in a heavier-than-air machine—with the exception of Mr. Henry Farman, whose many years in France must rob him of a portion of his claim to British nationality—Mr. J. T. C. Moore-Brabazon is also the first Briton to have made a circular mile flight on a British flyer. While the fact that the accomplishment of this feat secured for him a prize of £1,000 illustrates the proverb "To him who hath shall be given"—for Mr. Moore-Brabazon is one of those fortunate mortals who need not be distracted from the pursuit of more congenial studies by a care for ways and means—seldom was a prize more thoroughly deserved. He has devoted the whole-hearted, youthful enthusiasm which served him so well in motor racing to the cause of flight, and although he may be counted among the youngest—if he is not quite the youngest—of the flying men, his experience with aeroplanes is more extensive than that of many of the aviators who have recently come before the public eye.

It was in 1907—only two years ago, but years of great significance in aviation—that he adopted his new hobby, and with a machine built to his own designs he made a series of tests at Brooklands and elsewhere. It was not to be wondered at that this first attempt to solve a problem over which so many had vainly taxed their brains for ages should be unsuccessful, but at least Mr. Moore-Brabazon learnt much that was useful to him in subsequent experiments, and, subduing his disappointment, he took the sensible course of paying a visit to France, where the new science had meantime made great progress. Still failure dogged his steps, but with worthy determination and perseverance he abandoned the useless Voisin triplane, with which his first trials on the Continent were made, in favour of a biplane of the same make. This also gave indifferent results, and it was only with his fourth machine—the third of the Voisin models—that he eventually left the ground. This was the famous "Bird of Passage," which constituted one of the chief attractions of the Olympia Aero Show last March.

Many good flights were made with this machine in France, for the biplane had proved capable of really supporting itself in the air. Successful flight was only a matter of constant practice; this Mr. Moore-Brabazon had, and he soon gained confidence in the handling of his aerial mount. But the Olympia Show, which found in him a special attraction, interrupted his studies, and after returning to England with

his machine he got somewhat out of touch with Continental developments. Little has been heard of him during the recent year, but it was known that, to put the matter picturesquely, he had sacrificed his early love on the altar of patriotism. At first it seemed that his desertion of the Voisin type for a machine of British manufacture had been a mistaken move, for after many annoying delays in the delivery of a suitable engine—delays that prevented him from trying the new machine during the spring and summer—his first outing met with disaster. The aeroplane was smashed, and he himself had a most fortunate escape from injury; but, undaunted by hardships to which motor-racing had inured him, the next that was heard of him was that he had won the prize (on Saturday last) at which several of his fellow-countrymen were looking with eager eyes.

Mr. Moore-Brabazon, who is a member of the Committees of the Royal Automobile Club and the Aero Club of the United Kingdom, was educated at Harrow and Trinity College, Cambridge, and afterwards he had a twelve months' "finishing" course in France. But probably his most useful knowledge, in the light of after events, was gained during the six months that he spent in the Darracq works at Puteaux, for that brief sojourn in an atmosphere of petrol, so to speak, not only imbued him with a love for the intricacies of motor engineering, but made him that happy combination, an amateur with the attainments of a professional motor racer. He certainly owes much of his success, both as a driver on the road and as a pilot in the air, to his training in the works, for the engine of either motor car or aeroplane is an open book to him. He understands the tuning-up and adjustment of the motor as well as any mechanic, and who shall blame him if, a little Latham-like, he sometimes prefers to watch his instructions being carried out to soiling his own hands. At least he is fearless, with just that dash of recklessness that one admires while still deploring it—that touch of rashness which alone can make a pioneer aviator.

Motorists knew him best, until his present feat, as the winner of Circuit des Ardennes race in 1907. That was his most notable achievement in the motor racing world, but he has driven in other events, although with less success. But his efforts to reach fame on four wheels dwindle into insignificance, although noteworthy in their day, before his adventures in the air. There he has helped to make history—and he is only 25.

### A "Rubber-neck" Airship.

FROM New York comes an intimation that with a view to providing up-to-date entertainment for sight-seers, a company has been formed to build and run an airship capable of carrying twenty passengers. This will make trips twice hourly over the city, and visitors will thus be enabled to see what "sky-scrapers" look like when viewed from above, and also to have a sight of the suburban residences of the millionaires of New York. The airship was to have been ready in time for the Hudson-Fulton celebrations, but difficulties arose with regard to finance.

### Duke of Westminster Flying.

HIS GRACE THE DUKE OF WESTMINSTER, who has been a powerful supporter of motoring both on land and sea, has now turned his attention to motoring in the air. Last Saturday he visited Chalons, and after visiting the Voisin and Farman factories he made a short flight with Henry Farman.

At the conclusion he said that flying was the most fascinating sport that he had ever tried, and the sensation of rising to a height of 70 feet was one he would never forget.



## FLYING AT THE AERO CLUB'S GROUNDS, SHELLBEACH.

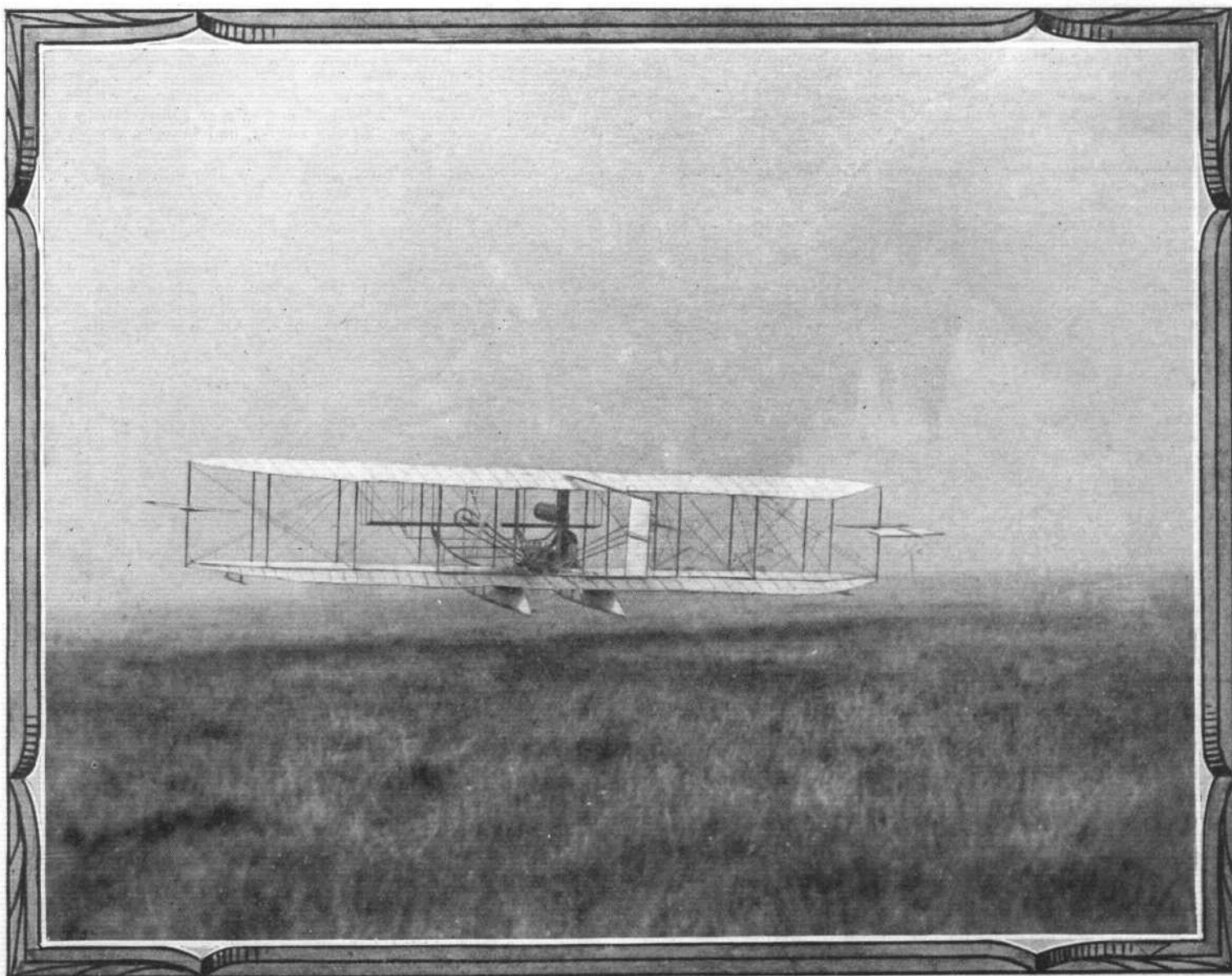
### £1,000 "All British" Prize Won.

At last a flying machine, entirely constructed in Great Britain, has flown for a mile out and home, and no doubt this will go a great way in stimulating interest in the home product. It was on Saturday last that Mr. J. T. C. Moore-Brabazon succeeded in fulfilling the conditions of the *Daily Mail* £1,000 prize for the first circular mile flown on a British machine, and his mount was the Short biplane with which he has been experimenting for some time at the flying ground of the Aero Club at Shellbeach. Our readers will remember that this machine was fully illustrated in our issue of October 9th, and from the photograph which we publish in this issue it will be seen that although the machine is in some respects similar to the Wright flyers, considerable differences are conspicuous. Instead of the wings warping, stability is effected by small supplementary planes pivoted between the extremities of the main planes; the main planes are rigid; the rudder is placed in front, while the trailing vertical plane is fixed; the skids are quite different, and the two propellers revolve in the same direction instead of opposite. The

motor fitted to the machine was a 50-60-h.p. Green, which has a bore and stroke of 140 by 140 mm., and weighs without fly-wheel and magneto about 250 lbs. It is quite fitting that this success should fall to Mr. Moore-Brabazon, for he was one of the first Englishmen to turn serious attention to flying. After experimenting with a machine of his own design for some time, he purchased a Voisin, on which he made one or two short flights. At the Aero Show at Olympia last spring he ordered the British-built machine from Messrs. Short Brothers, with which he has now met with such gratifying success.

### Hon. C. S. Rolls also Flies.

THERE promises to be some very exciting times down at Shellbeach shortly, for the Hon. C. S. Rolls is rapidly becoming quite proficient in the art of handling his Wright flyer, and he has secured the honour of being the first to fly on a British-built Wright machine. On Monday last he flew twice round the "village" of tin sheds on the Aero Club's flying ground, covering a distance of about a mile and a half, incidentally complying with the conditions for the Salomons Cup and one of the short flight prizes offered by the Aero Club.



Mr. Moore-Brabazon flying at Shellbeach on the Short biplane on which he won the "Daily Mail" £1,000 Prize on Saturday last.

## THE MISCHIEF-MAKING AT THE MANSION HOUSE.

THE so-called "conference" avowedly in the interests of aviation, announced to take place at the Mansion House on Thursday evening of last week, was attended by some 200 persons. That it in no way fulfilled the expressed objects of any programme of its conveners—the Aeroplane Club—there is little room to doubt. The main object of the meeting was to discuss the formation of a representative National Council to control and encourage aviation in this country. Major Baden-Powell presided. Among societies represented were the Aeroplane Club of Great Britain, the Leicestershire Aero Club, the Northumberland Aero Club, the Midland Aero Club, the Kite-Flying Association of Great Britain, the South-West of England Aeronautical Society, the Scottish Aeronautical Society, and the Sheffield Aero Society.

Mr. Windham, in introducing the Chairman, stated that Sir David Salomons was to have taken the chair, but he understood Sir David was told that the meeting was not held in accordance with the rules of a certain aero club, and that consequently if he presided he would be, like himself, a disqualified member.\* They were very pleased, however, to have with them Major Baden-Powell.

The Chairman, in opening, said that the meeting was not a meeting of the Aeroplane Club, which had only convened the gathering in order that the present position of aviation might be discussed. He wished to make it clear that he was present only as a private individual, and not as a representative of any particular organisation. Aviation was of great importance to English people, not merely because it was a new method of travel but because of the military possibilities. Recent meetings at Rheims, Doncaster, and Blackpool had drawn public attention to the matter. Our national reputation was at stake. France and America had led the way; we were behind. The meeting was called to consider the best means of fostering the growth of British aviation. There might be differences of opinion as to how this control should be carried out, and that was a question which had to be decided. He thought he voiced the general opinion in saying that national control for such a stupendous national work was beyond the power and scope of any single club. There must be a central, independent, and absolutely representative association. He moved the following resolution:—

"That this meeting is in favour of the formation of a representative National Council to control the sport and encourage the development of the science of aviation; such Council to consist of delegates representing all British Aeronautical and kindred Clubs and Associations and of representatives of His Majesty's Naval, Military, and Civil Services; and that this meeting favours the convening of a meeting to consider the course to be taken, in accordance with the resolution passed at the meeting of representatives of various clubs at Blackpool last week; and that copies of this resolution be forwarded to all clubs and associations interested in aviation."

This was seconded by Mr. Pepper, of the Midland Aero Club.

Mr. Delacombe, as a member of a society of which the Chairman was vice-president, asked if Major Baden-Powell took the chair in accordance with the wishes of the Aeronautical Society.

The Chairman: I do not know that that has anything to do with the resolution.

Mr. Delacombe: With regard to the resolution before the meeting, I would remind you that the wording of the resolution passed by the various clubs at Blackpool last week was as follows:—

"That the clubs and societies interested in aviation be invited to nominate three members each, to form a committee to meet representatives of the Aero Club of London to discuss the question of concerted action, with a view to advising the members of their respective clubs."

That, I believe, is the correct wording of the resolution.

Mr. Delacombe then went on to point out that the Aerial League, the Aero Club, and the Aeronautical Society had worked disinterestedly to advance the science and sport of aviation. It was peculiar for a new body to suggest control. That meeting was in opposition to the Aerial League, the Aeronautical Society, and the Aero Club.

The Chairman asked if Mr. Delacombe represented the Aero Club, or whether he was present as a private individual.

Mr. Delacombe: I am here as one deeply interested in aeronautics and as a member of the three bodies I have mentioned.

The Chairman: I may say I am the same.

Mr. Delacombe: That is the very reason I fail to understand your presence in the chair at this meeting.

Mr. Speranza (secretary of the Doncaster Meeting) said that Mr. Frost, President of the Aeronautical Society of Great Britain, had sent him a message of congratulation on the success of the

Doncaster Meeting, but from the attitude with regard to the proposal to have a National Council, he thought Mr. Frost must have been pulling his leg.

Sir William Bailey (Manchester Aero Club) hoped that no narrow-minded feeling would interfere with the progress of aviation.

Mr. Windham asked what the Aero Club had done compared with the Aeroplane Club, and gave a list of the achievements of the latter organisation, but the chairman thought it would be useless to discuss who gave the biggest dinner to Bleriot.

Mr. Holyrod Smith moved to omit from the resolution the words "control the sport," and the words after the word "taken" in the seventh line, and to add a rider reading "That until an association is formed, it is premature for any existing body to assume the right of control of aviation in this country either for sport or otherwise."

Mr. Bickmore seconded.

The Secretary to the Midland Aero Club: I do not wish to monopolise the discussion, but it seems to me I am called upon to throw some light upon the meeting of Blackpool. This matter was very thoroughly discussed; we all realised it was a very delicate question, and it was handled with great care. The proposition put before the meeting at Blackpool had the entire approval of all the clubs in the country. Mr. Roger Wallace was there, and he gave us full particulars, and we rose from that meeting with great respect for him, and I believe he went away with great respect for us. This meeting has been called by the Aeroplane Club, and they are in entire sympathy and entire approval of that proposition put before the meeting last week. Now, Gentlemen, the position is this: all the clubs are agreed upon a certain line of action to bring about a general or National Council which shall control the sport of aviation. There is no question of a hole and corner business or of electing a Committee or a National Council from anyone assembled to deal with the sport of the whole country. We realise that the question has been considered for weeks or months before it is settled, and to do that it is only fair and right and proper that every club in the country should have a voice in the matter, and in order that every club shall have a voice in the matter, they are called upon to elect from their members three delegates to deal with the question before such a committee, and that committee shall then confer with the representatives of the Aero Club. Now, Gentlemen, it seems to me that was a right step towards forming a National Council to deal with this difficult problem, and I am sure it is only upon those lines that you will be able to solve it. If we attempt to have any further proposition and then to arrange some committee, we shall fall to the ground and get bickering and quarrelling, and we shall make ourselves the laughing-stock of the world. What we want to do is to agree first of all that the whole of the clubs throughout the country, and through the clubs the whole of the people throughout the country, who are interested, shall send their representatives to a committee and form part of the committee which shall then discuss it with the Aero Club and Aeronautical Society, and I am sure out of that combination we shall have wisdom as the result, and we shall form a general National Council which will be a credit to the country and to the sport.

Mr. Pepper: I am sorry I must oppose the amendment for two reasons; first, because we of the provincial clubs do not see any reason why we should not have some voice in the control of the sport. Next, the meeting that was held at Blackpool was of no importance except that it focussed in a non-contentious way the views of the clubs represented and gave all an opportunity of meeting. The Aero Club happened to be those who summoned it. They are of no more importance amongst the clubs than any other club. I am afraid the last words would be regarded as offensive to the Aero Club and would not promote that settlement of the question that we desire. Personally, I should have to vote against the amendment.

Mr. Holyrod Smith: I proposed to leave out the words "control the sport" in order to put the association on a somewhat higher level. But if you gentlemen who are so fond of sport think that it is of so very much higher importance than the development of the science of aviation, then I must so leave it.

After further discussion, the meeting did not agree to take the element of sport from the resolution, but agreed to the words being added. Upon this, Mr. Pepper withdrew his seconding of the resolution. Mr. Percy Thornton, M.P., suggested that it would be better for aviation if there was unity, without which the Government could never do anything handsome for the science. Finally the meeting rejected the rider, and carried the original resolution.

In connection with this Mansion House meeting, and the remarks which we made upon it last week, Mr. A. B. E. Cheeseman, the Secretary of the Aeroplane Club, has written to us enclosing a copy of the communication which was circulated by him to the daily Press

\* Needless to say, this statement of Mr. Windham's is an absurdity.—ED.



and portended to be a reply to the joint public notice issued by the Aeronautical Society, the Aero Club, and the Aerial League last week. He now suggests to us that that communication of his is a sufficient reply to our comments. Our own view, however, is that the attitude which has been adopted by his mushroom club is so utterly untenable, and is rapidly being recognised as such by all who care to make enquiries, that no useful purpose can be served by reproducing in these columns Mr. Cheeseman's already published letter. After all said and done he does but reiterate the misleading statement that his Club

was the first body of any kind formed in the United Kingdom for the promotion of aviation with heavier-than-air machines—omitting even to ensure formal accuracy by using the phrase “only heavier-than-air machines”; while he endeavours to justify the existence of that body on the grounds that its numerical membership is a proof of the credence that has been gained for its pretensions. And then he apparently endeavours to argue (!) the Aeroplane Club's own particular claims to national recognition by merely asking why the already recognised bodies should have been accorded the positions of importance which they hold.



## FLYING AT BROOKLANDS.

JUST after he had made his first successful flight, Mr. Henry Farman, in January, 1908, paid a visit to England to spy out the land in order to find a suitable spot to fly the machine he was then experimenting with. Among other places which he visited was the Brooklands Track, but he came to the conclusion that it was by no means a suitable aerodrome. Doubtless, in the light of later events, he will revise that opinion, for on Friday and Saturday of last week and Monday last M. Paulhan showed that it was not only possible to fly there, but possible to keep on flying while the petrol supply lasted. With their characteristic enterprise the proprietors of the Brooklands Racecourse have come forward to fill the need for a practice ground for aviators, from which the public can be excluded and the experimenter pursue his way in undisturbed peace and quiet. A large plot of ground up by the Byfleet end of the track has been cleared of trees and levelled, and this forms a splendid “jumping off” place. It was due to this foresight of the B.A.R.C. that Londoners were given an opportunity to see an *homme-oiseau* manoeuvring between earth and sky. During a visit to Blackpool representatives of the Club saw Paulhan, and obtained his consent to give a three days' exhibition of flying at the Weybridge bowl. It had been arranged that M. Paulhan should give his first exhibition on the Thursday, but the wind and rain made it impossible for any flying to be done. Subsequently it was decided to make a further arrangement with Paulhan to fly on Monday, and it was then he set up a new record for Great Britain. The details of the flights each day will be found below:—

Friday, October 29th.

When Friday morning broke, rain fell and there was a fairly strong breeze blowing, and there appeared to be but a remote chance of any flying, but by ten o'clock the weather conditions had so far improved as to justify the hauling down of the black flag and the hoisting of a white one signifying “flights probable.” Only about 20 minutes later this gave place to the red one, and Paulhan was seen to be bringing his machine out of its shed. His first flight was quite a short one, just to assure the flyer that all was well, and as he found difficulty in switching off he came down and discovered a loose wire. This rectified, he once more went off, circling round the inside of the track four times. Shortly after noon he made a third flight, but came down complaining that he wanted a heavier petrol. While this was being sent down he made another flight, circling round the ground twice at a good height. During the afternoon the heavier petrol arrived and Paulhan immediately filled up his tanks. Starting off about three o'clock, he kept rapidly rising until a height of 200 ft. had been attained, which it was claimed was a record for England. He soon came down again, but within a few minutes he was off again and completed five rounds of the course. Then he took up his wife and flew round the ground twice, and in a second flight with his wife two circuits of the course were traversed. Then Mme. Paulhan surrendered her seat to Mrs. Locke King. It will thus be seen that none of the flights were of great duration, the longest being very little more than 10 minutes.



“Flight” Copyright Photo.

Remarkable Photograph of Paulhan Flying at Dusk on Saturday last over Brooklands Racing Track.—This snap was secured just as there was a reflection of the setting sun through the clouds silhouetting Paulhan's flyer against the brilliant patch of light.

Saturday, October 30th.

Experimenting with various brands of petrol occupied the best part of the time on Saturday morning, and it was not until nearly two o'clock that Paulhan made his first real flight of the day. He had made two or three long hops of two or three hundred yards in the morning, but nothing of any consequence was done. Then he made a flight which lasted nine and a half minutes, during which time he circled round the inside of the track four times. After a hurried lunch, the Farman biplane was again wheeled from its shed at a quarter to three, and Paulhan set off on a splendid flight which only ended when 58 mins. 57 secs. had elapsed. The start was most impressive, as during the first three or four rounds he rose at a very rapid rate until an altitude of 720 ft. had been reached, which has only been surpassed by the high flights of Orville Wright and Count Lambert. After this he swooped down, and kept on making circuit after circuit quite regularly, his speed working out at about 35 miles an hour. Later in the afternoon several more flights were made, one with a passenger, and another which lasted for 16 mins. 10 secs., but these were not witnessed by many people, as most of them went as soon as the long flight was ended. They thus missed the most impressive sight of Paulhan circling round in the dusk as portrayed in our photograph on the previous page.

Monday, November 1st.

Monday last was destined to see the longest flight yet performed in England, when Paulhan came near to beating Farman's world's

record, and very nearly equalling Latham's flight, which is second best. Just a few minutes after twelve Paulhan gave the word to let go, and glided off into space. There was a slight mist hanging over the racecourse, and as the flyer got down to the far end of the course he disappeared from view. Although there was practically no wind, the weather conditions were not favourable for long-distance flying, and as the time went on Paulhan found a bad headache developing through the extreme cold, and also his legs became cramped. He pluckily continued until he had been aloft 2h. 49m. 20s., and covered 96 miles, when the petrol supply gave out. Unfortunately, Paulhan has been unable to fix a third petrol tank to his machine, or he would have undoubtedly been able to keep going for more than three hours, and so have improved the world's record. He, however, secured Mr. C. A. Pearson's fifty guinea trophy by setting up a new distance record for Great Britain. After a good long rest Paulhan was out again, and manoeuvred for some time over the far end of the course, rising to a considerable height. These evolutions were closely watched by Lord Roberts, who has lent considerable support to the Aerial League in one way and another. The flight was brought to a conclusion in a dramatic manner when Paulhan shut off the motor and glided down from a height of about 400 ft., landing with the perfection of grace.

Among the large number who during the three days journeyed down to Brooklands to see the plucky flyer perform his thrilling feats have been H.R.H. the Duke of Connaught, H.R.H. Princess Henry of Battenberg, Lord Derby, Lord Dalmeny, Viscount Churchill, and many other distinguished persons.

## ANTWERP FLIGHT MEETING.

ANTWERP had arranged a flying meeting, to commence on the 23rd ult., but the wind and rain played havoc with the committee's intentions until the fifth day, when, during a brief respite, Baron de Caters made three short flights, and won the prize for the first kilometre flown at the meeting. On the following day Rougier was the star performer, the longest of his three trips being 1h. 16m. 8s., while the others were of 36 mins. duration, and 8 mins. 50 secs. During his long flight Rougier was officially credited with having traversed 49 kiloms. 665 metres, but one lap was not counted because he passed inside one of the marks. Each day heavy rain had fallen in the afternoon, and on Friday it never ceased, so that was a blank day.

Saturday saw Rougier making an attempt for the Altitude Prize, which he won by reaching a height of 120 metres. He also made one or two other short flights, as did de Caters, while Molon won the Débutants' Prize with a trip of 547 metres. During the day the dirigible "Zodiac" manoeuvred over the city, circling the Cathedral there, after which it journeyed to Malines, where the Cathedral steeple also presented a convenient turning point. In the course of the afternoon Prince Albert arrived to witness the flying, and indulged in an ascent in the dirigible. The weather on Sunday

prevented flying, and most of the aviators found the wind too much for them on Monday, although Rougier flew for six turns of the course, and de Caters went round twice, while the "Zodiac" made three short trips.

It was decided to wind up the meeting on Tuesday, and that day provided the best flying of the whole meeting, Rougier succeeding in beating the world's record for high flying, by reaching an altitude of 270 metres. The proceedings were opened in the morning by Lebauche, who on a Voisin biplane completed six laps, flying at a height of about 25 metres. Before he came down de Caters—by whom nine circuits of the course were covered—went up, to be quickly followed by Rougier, so that the crowd had an opportunity of seeing three Voisin flyers in the air at one time. Rougier covered eleven laps before coming down. The "Zodiac" made a journey during the morning to Brussels and back. It was in the course of the afternoon that Rougier finally won the Altitude Prize, and on alighting he was impressively congratulated by the burgomaster, the band meanwhile playing the "Marseillaise." The other flyers during the afternoon were Lebauche, de Caters, and Molon, each of whom completed two circuits, while the last-mentioned scored the best time for one lap of 1 min. 14 secs.

## FINANCING DONCASTER MEETING.

ON October 29th, in the Chancery Division, before Mr. Justice Swinfen Eady, a further motion was made in the action brought by Charles Holland Hastings, Frank Harris, Hugo Martens, and Louis Hamon against William Caspar, Mr. Byron, Mr. Beauclerk, and Frank Reichel, sporting editor of the *Paris Figaro*, in respect of an alleged partnership relating to the late Doncaster Aviation Meeting.

Mr. Frank Russell, K.C., for the plaintiffs, said what he wanted was a receiver of any moneys payable by the Doncaster Town Council in respect of the aviation meeting to any of the defendants. The position had been somewhat altered since last motion day in this respect. Mr. Caspar had retired from the contest, and he did not appear before the Court by counsel, so that any opposition on his part was removed. Mr. Reichel had only been served since last motion day. He had put in an affidavit in which he supported the continuance of the receiver. That left remaining of the defendants Byron and Beauclerk. He understood that his learned friend, Mr. Ward Coleridge, objected on behalf of one of the defendants to the appointment of a receiver, he alleging that there was a partnership. Under those circumstances he asked his Lordship to appoint a receiver until judgment on further order.

Mr. Justice Swinfen Eady said: There were no principals disclosed and the parties disclaimed having had anything to do with the matter. Who were the agents and who made the contract?

Mr. Russell: I do not quite know yet. Reichel has made an affidavit, which perhaps may throw some light upon the subject. I think the arrangement was an arrangement between the Corporation

and Caspar and Reichel; our case was that Caspar had taken steps in the first instance as a partner with us, and had used his position to exclude us from the benefits of the aviation meeting so as to reap the benefit himself.

Mr. Justice Swinfen Eady: Why is the contract between the Corporation and Caspar not produced? Everything seems so vague and indefinite. I will not appoint a receiver until I know more about the case.

Mr. Barlow, who appeared on behalf of Mr. Reichel, said there was only the resolution of the Town Clerk of Doncaster, guaranteeing a certain sum of money towards the expenses. The Corporation guaranteed £5,000, which was to be redeemed by the gate money and the receipts generally. Any surplus over £5,000 would be handed over. The Town Clerk had informed him that there was a deficit of £8,000. He was not in a position to furnish figures of the receipts and gate money, but he was instructed by the Town Council that they intended to share a portion of the losses. The Corporation stood to lose £2,000, which would, he thought, make the gate money £3,000.

Mr. Justice Swinfen Eady asked if it appeared who the association of French sportsmen were.

Mr. Russell said the association of French sportsmen had turned into Belgian capitalists. According to the affidavit made, only one was a Belgian, and the others were domiciled in London and Paris.

Mr. Justice Swinfen Eady ultimately appointed a receiver of any sums payable by the Corporation of Doncaster.



# AERO CLUB OF THE UNITED KINGDOM.

## OFFICIAL NOTICES TO MEMBERS.

### Committee Meeting.

A MEETING of the Committee was held on Tuesday, the 2nd inst., when there were present: Mr. Roger W. Wallace, K.C., in the chair, Mr. Ernest C. Bucknall, Col. J. E. Capper, C.B., R.E., Mr. Martin Dale, Mr. John Dunville, Capt. A. H. W. Grubb, D.S.O., R.E., The Earl of Hardwicke, Professor A. K. Huntington, Mr. J. T. C. Moore-Brabazon, Mr. C. F. Pollock, Hon. C. S. Rolls, Mr. Stanley Spooner, H. E. Perrin (Secretary).

**New Members.**—The following new Members were elected:—

B. H. Balassanian.	F. A. Keating.
Hon. Mrs. Biddulph.	Mrs. Gerard Leigh.
Cedric Boustead.	Alexander Leith.
Maj. F. E. Bradshaw.	Capt. Charles Edward Lembcke.
Dr. Robert Tennant Bruce.	G. Michael Lembcke.
Mrs. E. Chapman.	C. Lorenzen.
Arthur C. Churchman.	George Herbert Mair.
Reginald Corbet.	E. E. Moreau.
W. Frank D'Arcy.	E. T. Ruthven Murray.
John D. Denham-Smith.	Fearnley Wells Owen.
Dr. J. Cunningham Duncanson.	Miss Beatrice Rennie.
Frank Eustace Faithfull.	Miss Gertrude Rennie.
Frank Fisher.	Campbell Swinton.
Capt. A. F. Fletcher.	H. C. Thiselton.
George C. Garrick.	Charles C. Turner.
Hugh S. Greg.	F. P. Walker.
C. G. Grunhold.	Charles William Wallace.
Philipp Horvath.	Capt. Walter N. Wells.
Edward Hutchinson.	C. M. Wheatley.

### £1,000 "Daily Mail" Prize.

The Committee of the Aero Club, at their meeting on Tuesday last, unanimously decided that the conditions of the above prize had been fulfilled by Mr. J. T. C. Moore-Brabazon by his circular mile flight at Shellbeach, on Saturday, October 30th. As soon as the necessary formal certificates regarding the entire British manufacture of the machine and engine are received, the Committee will notify the proprietors of the *Daily Mail* of their adjudication.

### Aero Club Prizes for Short Flights.

The Hon. C. S. Rolls made a flight of over 250 yards at the Shellbeach Flying Grounds on October 22nd, 1909, thereby gaining the first of the £25 prizes offered by the Aero Club of the United Kingdom for this achievement.

This still leaves three prizes of a similar value under the same conditions to be won by other aviators at the Aero Club Flying Grounds. The Aero Club also offer three prizes of £50 each to the first three competitors who shall succeed in flying one mile in a closed circuit at the grounds at Shellbeach. The rules governing these flights are set out fully in the Year-Book already issued.

### Salomons Cup.

The Aero Club has awarded the 100 guineas Salomons Cup to the Hon. C. S. Rolls for his circular flight at the Shellbeach Flying Grounds on Monday last.

The cup was presented to the Aero Club by Sir David Salomons, Bart., for a half mile flight out and home on a machine "heavier-than-air."

### Mortimer Singer Plate.

The Aero Club has awarded the "Mortimer Singer Plate" to the Hon. Mrs. Assheton Harbord, who made a journey of 78 miles in a balloon on September 11th last. The Plate was presented by Mr. A. Mortimer Singer for the longest balloon trip during the months of July, August and September.

### Gold Medal to Hubert Latham.

The gold medal of the Aero Club, in recognition of his recent flight in a 40-mile wind at Blackpool, was presented to Hubert Latham at an informal luncheon at the Royal Automobile Club on Wednesday last, the 3rd inst. Mr. Roger W. Wallace, Chairman of the Aero Club, made the presentation, and Mr. Latham, in a brief speech, expressed his gratification at the honour paid to M. Levavasseur, as the designer of the machine, and to himself.

### Shellbeach Flying Ground.

Members visiting the flying ground are requested to have with them their membership cards, as strict instructions have been given to admit only members to the flying ground.

Members are also reminded that access to the aeroplane sheds can only be obtained with the written consent of the owners of the flying machines.

**Telephone.**—The telephone has now been installed. Members wishing to telephone there are requested to ask for 5B Minster-on-Sea, Isle of Sheppey. The telephone is installed in the Club House, and also to the sheds on the grounds.

**Erection of Sheds.**—Members wishing to erect sheds at Shellbeach are requested to apply to the Secretary, who will supply all information.

**Railway Arrangements.**—The following reduced fares have been arranged with the railway company for members visiting Shellbeach:—

1st Class return, 8s.; 2nd Class return, 6s. 6d.; 3rd Class return, 5s.

Tickets available for one month from date of issue.

Members desiring to avail themselves of these reduced fares are required to produce vouchers at the booking offices. Vouchers can be obtained from the Secretary of the Aero Club. Trains leave Victoria, Holborn, or St. Paul's.

For the convenience of Members, the best train is the 9'45 a.m. from Victoria, arriving at Queenborough 10.55. At Queenborough change to the Sheppey Light Railway for Leysdown (Shellbeach), which is  $\frac{3}{4}$ -mile from the flying ground.

HAROLD E. PERRIN, Secretary.

The Aero Club of the United Kingdom,  
166, Piccadilly, W.



## PROGRESS OF FLIGHT ABOUT THE COUNTRY.

(NOTE.—Addresses, temporary or permanent, follow in each case the names of the clubs, where communications of our readers can be addressed direct to the Secretary.)

### Blackpool Aero Club (56, COOKSON STREET).

ON Wednesday evening, 24th inst., in the Hotel Metropole, at 7.30, Mr. A. T. Houghton has consented to read a Paper on "The Theory of Flight," and the Honorary Secretary will give a demonstration in model-making, after which there will be a general discussion. All members are invited to attend, and if a member possesses any models or parts of models that would interest other members, would they bring them for exhibition?

It is also proposed to hold a Model Flying Competition early in the New Year, which will take place in one of the large ballrooms in Blackpool. Several books have been added to the library and are now available for the use of members.

The following gentlemen have been elected on the committee of the club:—Dr. Hugh McManus, Mr. W. Holmes, Mr. W. Balshaw.

### Liverpool Aeronautical Society.

A MODEL demonstration was held at Woolton on Saturday last, and, although only seven members took part, it provided some very interesting results. Mr. H. Lodge secured the first prize with his Finbat monoplane in the three competitions for speed, distance, and

stability, while Mr. Matthews was second in all three. In the speed contest Mr. H. Lodge's machine flew 306 ft. in 13 secs., while Mr. Matthews' model flew 76 ft. in 6 secs., while in the distance competition Mr. Lodge won with 286 ft. and Mr. Matthews was second with 36 ft.

### Midland Aero Club (THE BUNGALOW, STECHFORD, BIRMINGHAM)

ON the 29th ult. the first social meeting and exhibition of models was held at the Grand Hotel. A large number of members and their friends were welcomed by Captain Cooke, Chairman of the Club, and he explained to the meeting the aims and objects of the Club. Sir Richard Paget said that Dunstall Park Racecourse would be placed at the disposal of the Club when race meetings were not going on, and he also suggested that Dunstall Hall would make a valuable residential club for prospective flyers who wished to stay near the ground.

The subsequent entertainment included humorous sketches by Mr. Willis Crisford, cinematograph pictures illustrating M. Bleriot's cross-Channel flight and flying at Blackpool, and the testing of model aeroplanes. The models shown by members of the Club and

others were an extremely interesting collection, representative of the Cody, Wright, Voisin, Bleriot, and Antoinette types, besides biplanes and monoplanes of notably original design.

## Northumberland Aero Club (4, ROSEBURY CRES., JESMOND).

WITH Mr. Faraday Proctor in the chair, the first general meeting of the members of the Northumberland Aero Club was held on the 27th ult. at the County Hotel, Newcastle. A letter was read from the president (the Hon. Charles Parsons) regretting his inability to attend.

The committee was elected as follows:—Messrs. G. E. Carr, Arthur Bridges, W. Allan, H. E. White, T. Oliver, S. Gillett, A. S. Humphreys, J. T. Nyborg, Gerald Rose, G. Seymour, Gerald Stoney, Jas. Cusworth, Duncan Campbell, Faraday Proctor, R. Hodge and Oswald Elsworth, with power to add to their number. Mr. A. S. Humphreys was elected treasurer.

The Secretary reported that a letter had been received from Mr. J. Duncan Hodgson, stating that he would be glad to place any proposals the Club might have with regard to a trial ground or prospective aviation meeting before the Gosforth Park Company, in which he was interested. It was agreed to thank Mr. Hodgson for this offer.

## Oxford Aero Club.

AN Aero Club is being initiated at Oxford, and with excellent prospects of a useful and increasingly interesting sphere in the promotion of the study and practice of aviation amongst the members of the University and professional men in Oxford.

A meeting will be called shortly, when the objects and constitution of the Club will be definitely determined.

Communications for the promoter should be addressed Aero, c/o Messrs. Collier Bros., St. Aldate's, Oxford.

## Scottish Aeronautical Society (185, HOPE STREET, GLASGOW).

WITH the object of fostering the building and flying of model machines, it has been decided to form a model section of this Society. The subscription is fixed at 7s. 6d. per annum, and the subscriptions will be paid into a separate fund, which will be used wholly for model work. The section will be governed by a committee of management elected from the members, and the parent society will assist by giving a medal quarterly, and also free use of the library, and certain use of the workshop, and later on it is hoped to give a challenge trophy for annual competition.

## Sheffield Aero Society (36, COLVER ROAD, SHEFFIELD).

ON the 27th ult., at a public meeting held in the Wentworth Café, Sheffield, under the chairmanship of Mr. P. H. Dudley, the question of forming the Sheffield Aero Society was considered. It was decided not to start the Society then, but to wait a few weeks and arrange for a lecture on "Flight" to be given at a public meeting, after which members will be enrolled. Mr. Wightman was asked to undertake the duties of Secretary, *pro tem.*, and his address is as above. He will be glad to hear from anyone interested in the project.

## Shoreham Model Aero Club (CHURCH STREET, SHOREHAM).

WITH the object of banding together aeroplane model makers in the neighbourhood of Shoreham, the above Club has been formed, and arrangements have already been made for a shed in which to build models, while a local gentleman, Mr. Buller, has offered the use of a ground suitable for flying experiments. The hon. sec. is

⊗ ⊗

## A Flight Scholarship.

WITH a view to promoting British supremacy in flying matters, the Women's Aerial League have offered a scholarship of £50 a year for three years to the Imperial College of Science and Technology at South Kensington. It will go to assist one of the engineering students who wishes to devote himself particularly to aeronautical studies.

## A Note of Interrogation.

SOME curiosity has been expressed by several readers as to the meaning of the note of interrogation after the word "Aero-Naph" in the Anglo-American Oil Co.'s advertisement last week. We find upon inquiry that it has no particular significance. It is merely the result of an

Mr. S. H. Winton, and he will be pleased to hear from anyone interested at the above address.

## Shropshire Aero Club (3, CASTLE STREET, SHREWSBURY).

A GENERAL meeting was held on the 30th ult., when amongst those present were Mr. Beville Stanier, M.P., Mr. Reginald Corbet, Mr. C. R. B. Wingfield, and Mr. C. E. Jenkins.

On the proposition of Mr. Stanier, the chair was taken by Mr. Corbet. The Secretary then proposed that Beville Stanier, Esq., M.P., be elected as President of the Club; this was seconded by Mr. T. Golling, and carried unanimously. Mr. Stanier accepted the position with the promise to do all in his power to help the Club. It was then proposed by the Secretary that the following gentlemen be elected as Vice-Presidents of the Club, viz., Sir Henry W. W. Ripley, Bart., Sir Bryan Leighton, Bart., Lieut.-Col. F. Fitzherbert, D.S.O., Mr. Reginald Corbet, Mr. W. J. S. Barber-Starkey, Mr. C. R. B. Wingfield; this was seconded by Mr. S. H. Shuker, and also carried unanimously.

The Chairman then spoke of providing an aeroplane for the Club, and after discussion the matter was referred to the Committee, to be dealt with at their discretion.

Mr. C. E. Jenkins proposed that a glider be provided, and on considering the point Mr. C. B. Wingfield offered to give £5 for a glider to be built by the Club members, and the Chairman made a similar offer for another; Mr. S. H. Shuker offered to undertake any machining or workshop labour free of cost in this matter.

The meeting was closed with the understanding that the list of members should be increased as quickly as possible.

## S.W. England Aeronautical Soc. (51, ST. LEONARD'S RD., E. SHEEN)

AT a meeting of the technical committee, held at 32, Bridge Avenue, Hammersmith, on October 28th, it was decided to construct a Wright-type glider, and drawings are now being got out for this. It is hoped that it will be finished at an early date. A lantern entertainment has been arranged for the next general meeting.

## Yorkshire Aero Club (63, ALBION STREET, LEEDS).

A MEETING of the Club was held at the New Exchange, Briggate, Leeds, on October 26th, when Mr. H. Dunn, C.E., took the chair. It was announced that the membership was rapidly approaching 250, and amongst the members elected was Mr. Hamar Greenwood, M.P., while M. Delagrange was elected an honorary member. Mr. A. Farnell, of Bradford, reported the proceedings at the conference held at Blackpool. It was decided that Messrs. Dunn, Farnell, and H. A. Jones should be elected to represent the Yorkshire Club at the conference with the Aero Club during Olympia Show week. It was resolved, through the medium of the Midland A.C., to endeavour to hold a preliminary conference of the provincial club representatives, so that a joint effort might be made to secure satisfactory terms for affiliation.

On Tuesday evening a very successful conversation and exhibition of photographs, drawings, and models relating to mechanical flight was held, and members turned up with friends in great numbers. The photographs numbered between 400 and 500. The models aroused keen interest, and an exhibition of flight took place with one which caused great enthusiasm. A syllabus of lectures has been arranged, and a commencement will be made on November 16th, when the Chairman, Mr. Herbert Dunn, will lecture at 8 p.m. on "Patent Law in its relation to Aeronautical Invention." The Club's headquarters have been fixed at the Leeds Exchange, Briggate, Leeds, and the official address is as above.

⊗ ⊗

accidental touch of one of the keys by the advertisement type-writer, which passed unnoticed by the clerk. There are no queries about Aero-Naph—it is a certainty.

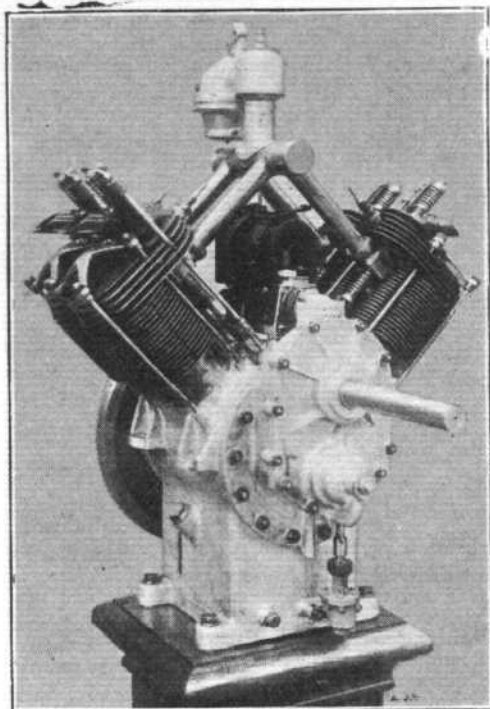
## Dermisilk for Aeroplanes and Models.

THOSE in search of a very light waterproof material for use as a surface fabric on aeroplane models, and also the full-sized machines, should obtain samples of "Dermisilk" from Messrs. Jones and Message, of 6, Holborn Circus. The fabric is a light waterproofed silk, and is made in three strengths, No. 1 being extremely light for small models, No. 2 being a medium weight suitable for large models, and No. 3 being the strongest for large machines. The price ranges from 1s. to 5s. per square yard.

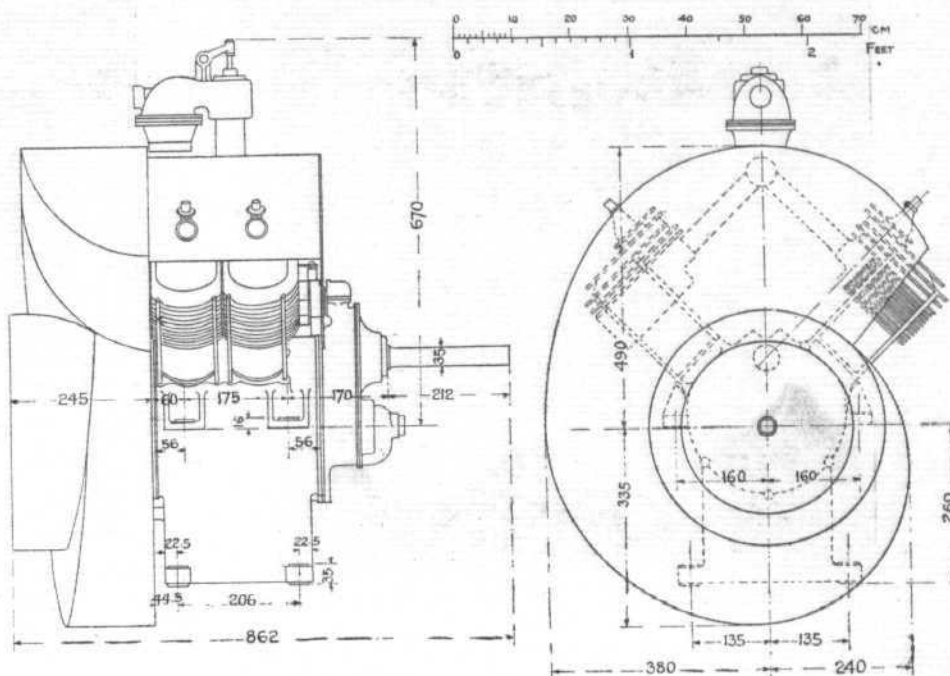


# FLIGHT ENGINES AT PARIS SHOW—(continued from page 692).

the same secondary shaft, which is gear-driven from the crank-shaft, and lies alongside the crank-chamber.



Paris Flight Show.—The 25-h.p. 4-cyl. air-cooled Renault engine, showing the arrangement of the carburettor, magneto and oil-pump.

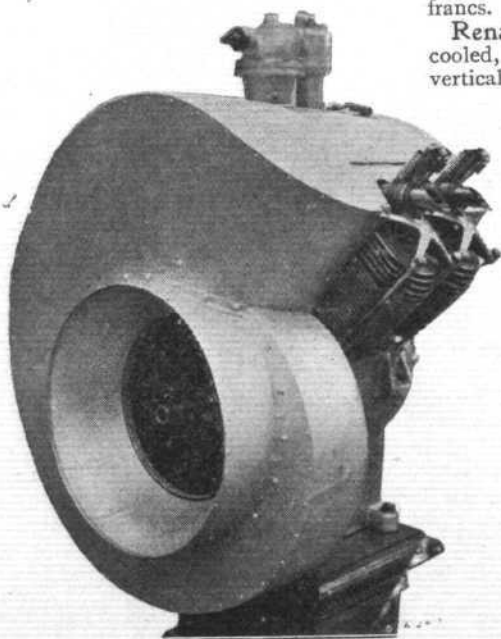


PARIS FLIGHT SHOW.—Dimensioned outline drawing of the 25-h.p. air-cooled 4-cylinder Renault.

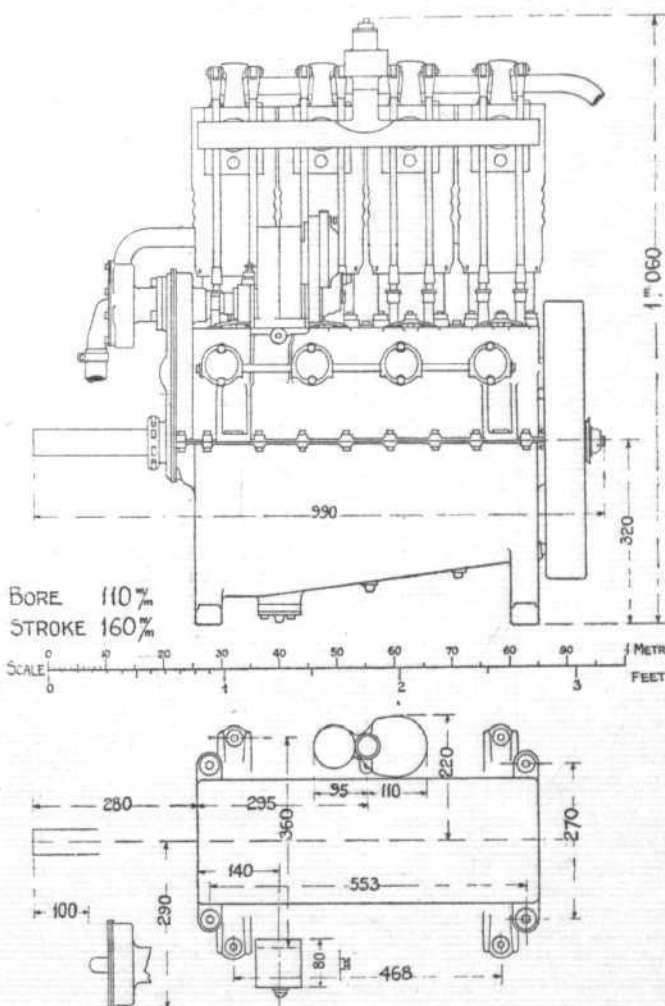
**Renault 25-h.p.**—Air-cooled, 4-cyl. V type engine. This is the smallest model for flight made by Messrs. Renault, and is a very neat design. The cylinders are cast separately, and have circumferential radiating gills, as also have the independent cylinder-heads, each of which is held in place by an external yoke secured to the crank-chamber by four long bolts; these same bolts hold down the cylinders. Both valves are mechanically operated, and all are controlled from the same cam-shaft, which is situated immediately above the crank-shaft; the exhaust-valves are placed over the induction-valves. The magneto is mounted on the top of the crank-chamber under an arch formed by the induction-pipes. The crank-chamber is a one-piece aluminium casting, and has detachable aluminium end-plates for the support of the crank-shaft. Lubrication is effected by a pump situated outside the crank-chamber.

*Dimensions.*—90 mm. by 120 mm.; weight 115 kilogs.; 25-h.p. at 1,200 r.p.m.; price 6,000 francs.

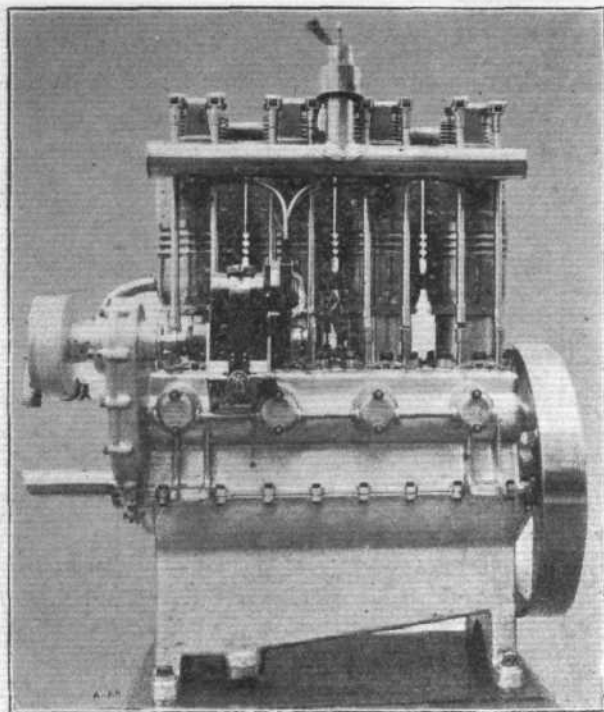
**Renault 45-h.p.**—Water-cooled, 4-cyl. engine of the vertical type, having separate steel castings for the cylinders. Corrugated copper water-jackets are fastened in place by screws, but a part of the water space in the vicinity of the cylinder-head is formed in the casting. All valves are mechanically operated, and situated vertically in the cylinder-heads. The single cam-shaft lies inside the crank-chamber in the usual way. Magneto ignition and a water-pump are provided, these two members being driven off opposite ends of



PARIS FLIGHT SHOW.—Another view of the 4-cyl. air-cooled 25-h.p. Renault, showing the fan in place.



PARIS FLIGHT SHOW.—Dimensioned outline drawing of the 4-cylinder 45-h.p. Renault water-cooled engine. Bore and stroke 110 x 160.

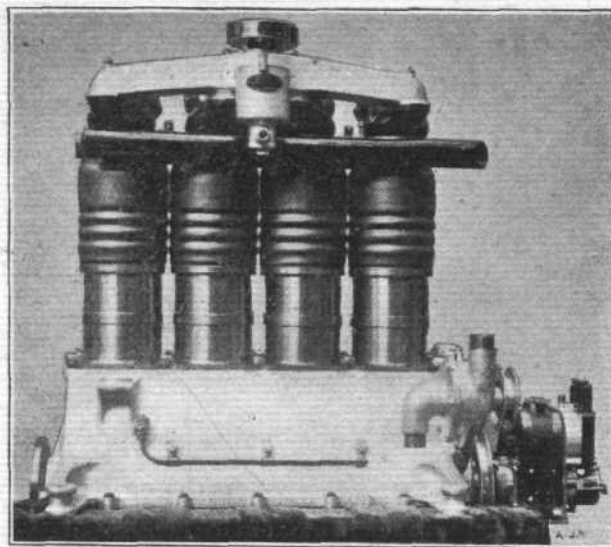


PARIS FLIGHT SHOW.—The 45-h.p. 4-cyl. water-cooled Renault.

*Dimensions.*—110 mm. by 160 mm. ; weight, 190 kilogs. ; h.p., 45 at 1,100 r.p.m. ; price, 11,000 francs.

**Green 50-h.p.**—British-built 4-cyl. vertical water-cooled engine. The steel cylinders are fitted with copper water-jackets, which have a sliding expansion-joint at the bottom, and are held down by the

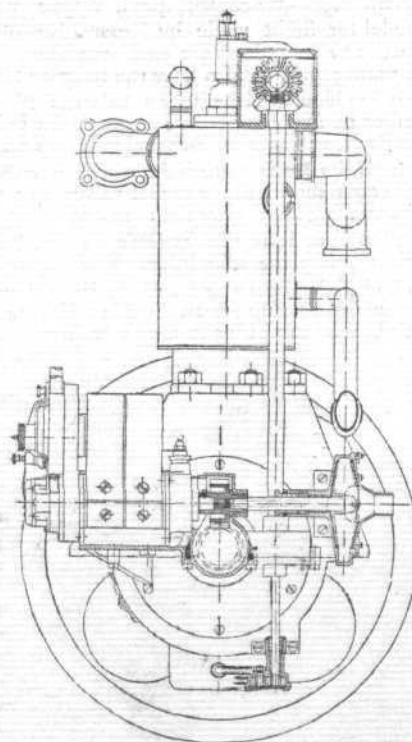
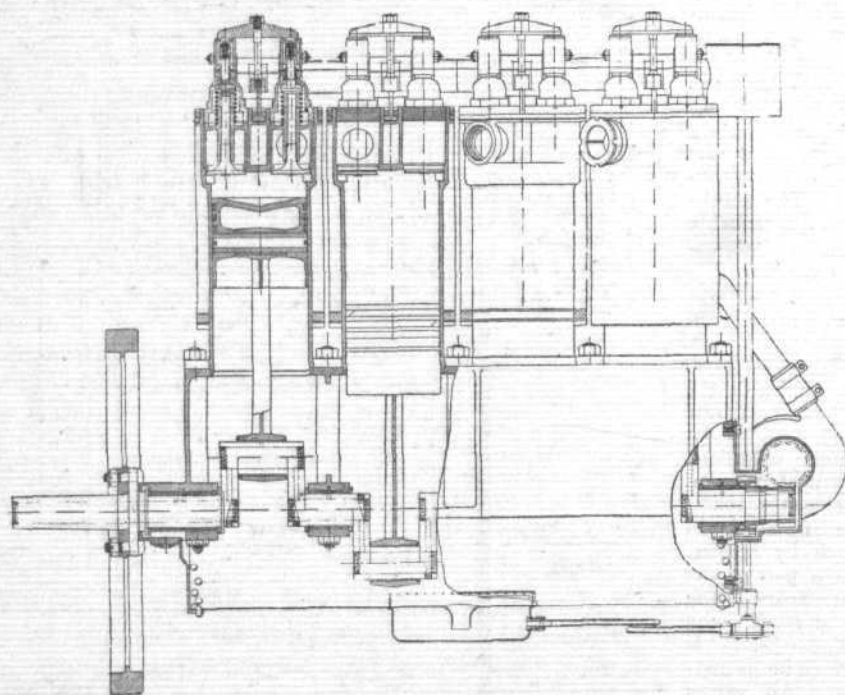
against 168 kilogs., which is the weight of another Panhard model rated at the same power. The principal difference lies in the use of very light cylinder-heads and combined concentric valves situated vertically in them. Both valves are mechanically operated by



PARIS FLIGHT SHOW.—View of the special 35-h.p. Panhard flight engine, which has combined concentric-valves in the cylinder-heads.

means of a double-acting tappet-rod ; the detail of this mechanism is uncommon, for the inlet-valve is controlled by a small rock-lever pivoted on the tubular stem of the exhaust-valve.

The cylinders are cut from solid steel as also are the pistons, but the rings are cast-iron ; lubricant is forced to the crank-shaft by a



PARIS FLIGHT SHOW.—Sectional side and end elevations of the British-built Green engine, showing the overhead valves and method of driving the overhead cam-shaft.

valve-cages at the top. All the valves are mechanically operated by an overhead cam-shaft. Further particulars of this engine, which is not only one of the most interesting, but also one of the best-made motors at the Salon, have already appeared in *FLIGHT*, April 3rd, 1909.

*Dimensions.*—140 mm. by 140 mm. ; weight, 250 lbs., without fly-wheel or magneto.

**Panhard 35-h.p.**—Four-cylinder vertical water-cooled engine of specially light construction, the weight being only 90 kilogs. as

belt-driven pump, and splash is allowed to take place also. The corrugated copper water-jackets are soldered into a groove at the bottom and clamped down by the cylinder-head, which screws in place, at the top. The water-connection between adjacent cylinder-jackets is made by closing the gap between two abutting pipes with a rubber ring held in place by a steel strap.

*Dimensions.*—110 mm. by 140 mm. ; weight, 90 kilogs. ; h.p., 35 at 1,000 r.p.m. ; price, 10,000 francs.

(To be continued.)



# AVIATION NOTES OF THE WEEK.

## Col. Capper on Military Flying.

ON Thursday, November 18th, Col. J. E. Capper is to deliver a lecture at the Royal Artillery Institution on "The Military Aspect of Dirigible Balloons and Aeroplanes." Major-General H. E. Belfield will preside, and after the lecture, which will be illustrated by lantern slides, there will be a discussion.

## Changes at Aldershot.

OUR readers will note with interest that Mr. Mervyn O'Gorman, who is chairman of the Expert and Technical Committee of the R.A.C., has been appointed Superintendent of the Balloon Factory at Aldershot. Col. Capper will in future devote all his time to the directing of the instruction school.

## Mr. Cody to Fly at Aintree.

It is announced that the *Liverpool Daily Post*, who are taking charge of the arrangements for the £1,000 prize for a flight from Liverpool to Manchester, have made an arrangement with Mr. Cody to give a three days' exhibition on the Aintree racecourse, commencing on the 16th inst., and concluding with an attempt to fly to Manchester. At the same time there will be prize competitions for model flying machines.

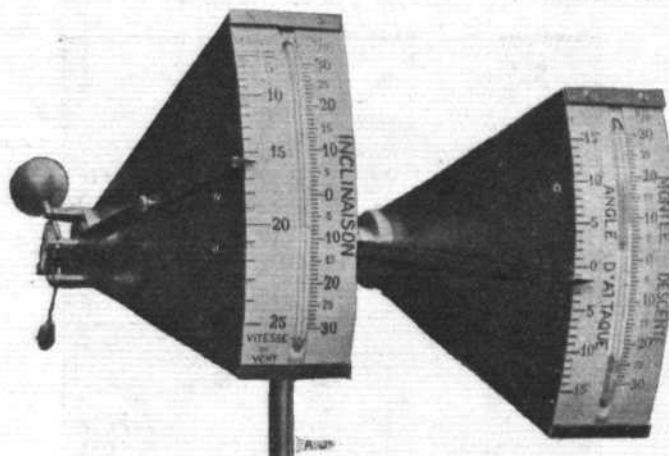
## Paulhan at Sandown Park.

ON the conclusion of his engagement at Brooklands, Paulhan made an agreement to fly on the Sandown Park racecourse yesterday and to-day (Saturday). His intention is to make attempts to beat both records for height and duration.

## Naval Officers and Aeronautics.

LAST week, in the House of Commons, the First Lord of the Admiralty was interrogated with regard to the selection of officers to take part in experimental aeronautic work, and whether he had made it known that

no engineering officers would be chosen. To this, Mr. McKenna replied that two officers only have so far been selected to work the airships now under construction. No decision has been made not to employ officers of the engineering branch; when the services of officers of this branch are required, the necessary selections will be made.



**A LEVEL AND WIND INDICATOR FOR FLYERS.**—The above photograph illustrates an interesting instrument which has been designed for use on flying machines by M. Arnoux, the Vice-President of the Technical Committee of the A.C.F. It indicates the force of the wind, the inclination of the machine, and the "angle of attack" when ascending or descending.

## Farman Improvements, &c.

LAST Saturday Henry Farman tried a new method of warping the wings on his biplane, which was entirely successful. It being the anniversary of the first cross-country flight from Chalons to Rheims, on October 30th, 1908, he had intended to traverse the journey again, but the high wind made this impossible.

## Henry Farman Flies Again with a Passenger.

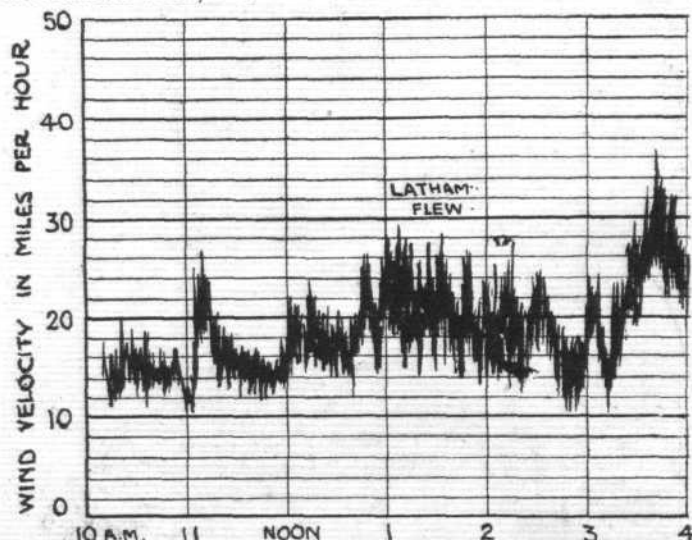
AT Chalons, Mr. Henry Farman finds time now and again to escape from the cares of looking after his aeroplane factory to take a trip into the air and just "keep his hand in." On Monday morning he made a flight of 40 mins. with a passenger, but in the evening he went one better, and set up a new French passenger record of 1h. 16m. 35s., the only record better than this being Orville Wright's at Berlin, when he flew with Captain Engelhardt for 1h. 35m. 47s.

## Farman Again Breaks World's Records.

ON Wednesday, however, Mr. Farman made another huge step forward by adding over an hour to his own world's record for duration. He started shortly after twelve o'clock, and 4h. 17m. 35s. elapsed before he touched earth again. In the course of that time he completed 150 miles, but part of this was flown after the sun had gone down, and so he will only be credited with 137½ miles (221 kiloms.) in his record for the Michelin Cup. That, however, places him a good way ahead of his world's record at Rheims of 112 miles in 3h. 4m. 56s.

## Maurice Farman's Cross-Country Flights.

ON the same day as the above Mr. Farman's younger brother Maurice also made one of his aerial excursions over the country round about Buc. This time he flew for three-quarters of an hour, during which time a heavy fog lay over the ground, and it was very impressive to see him disappearing and reappearing in the thick mist.



**LATHAM'S GREAT FLIGHT.**—The above diagram is a copy of the actual chart representing the state of the wind on the aerodrome at Blackpool on Friday, October 22nd. Latham made his flight between one and two o'clock in the afternoon, when, as will be seen by the section between those hours, the wind fluctuated between 15 and 30 miles an hour. The chart was produced by a Dines pressure-tube anemometer, and consists of a sequence of vertical movements on the part of a fine-pointed pen. The proximity of the vertical lines, which gives them collectively the appearance of a ragged-edged band, is an indication of the frequency of the gusts.

## Another Wright Pupil Flies for an Hour.

GRADUALLY making his flights longer and longer, Capt. Engelhardt, on Friday of last week, at Berlin, succeeded in staying in the air for more than an hour, his time being 1h. 6m. 30s. Two days previously he made a flight lasting half an hour, during which his average altitude was between 30 and 40 metres, and this in spite of a fairly strong south-east wind blowing across the Bornstedt.



The First All-German Flyer.—Herr Grade is seen in the above view on his monoplane during the flight on Saturday last at Bork, which secured for him the £2,000 prize offered by Herr Lanz for the first German to describe a figure "8" round two posts placed a kilometre apart.

## Herr Grade Wins a Prize.

AFTER long and patient experimenting, Herr Grade has at last met with success, and last Saturday succeeded in winning the Lanz Prize of £2,000, easily fulfilling the conditions required. These were that the aviator must be of German nationality and use a German built machine, and describe a figure "8" round two posts placed a kilometre apart. Herr Grade's machine, as will be seen from our photograph, appears like a combination of the latest Bleriot and Antoinette machines, the aviator sitting below the main planes. On the following day Herr Grade had his monoplane out again at Johannistal and made four flights, the first three of 3 mins. 45 secs., 14 mins. 30 secs., and 4 mins. 55 secs. respectively, while the last was of one turn round the course. From this it would seem that at last Herr Grade had overcome his difficulties and evolved a successful machine.

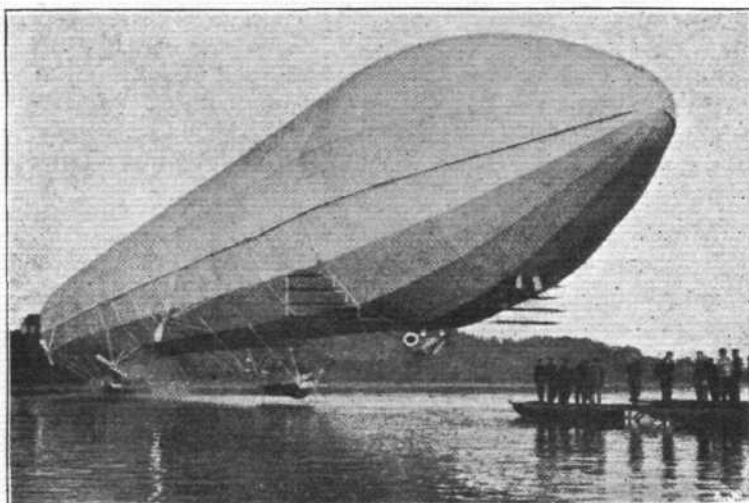
## M. Bleriot Mobbed at Bucharest.

ON Thursday of last week M. Bleriot was to have given an exhibition of flying at Bucharest, but was prevented by an unfortunate accident which put his engine out of action. The cylinders were damaged, and there being no spare motor available, there was no help for it but to wait until another engine could be obtained. The large crowd, however, which had assembled to see the flights, felt aggrieved, and breaking through the fence stormed the hangar, and badly treated M. Bleriot's manager. The new engine was fitted by Sunday, and M. Bleriot then carried out three flights, one of 10 mins. 50 secs., a second of 17 mins. 20 secs., and the third of 21 mins. 20 secs.

## AIRSHIP NEWS.

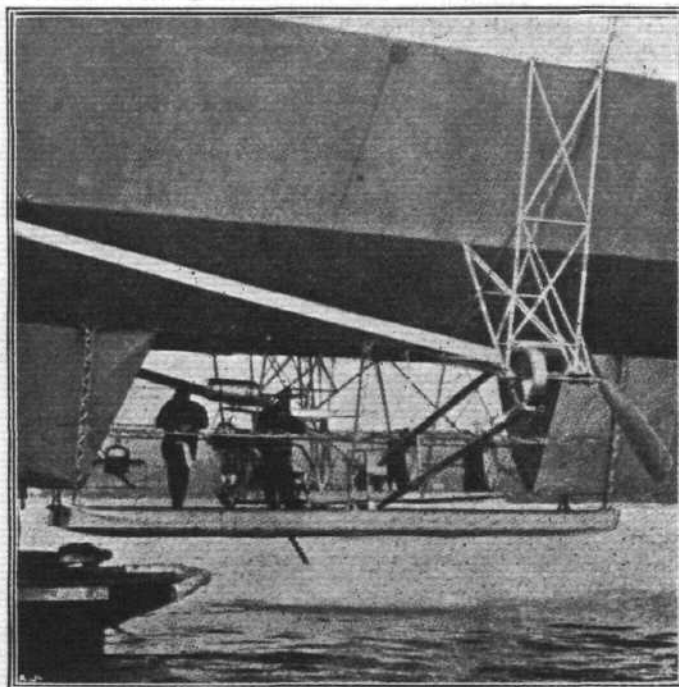
### German Airship Manoeuvres.

DURING last week-end plenty of excitement was provided at Cologne by the trials carried out in the neighbourhood by the military authorities with the various types of dirigible balloons. Four vessels took part—the "Zeppelin II," "Gross II," and "Parseval I" and "Parseval III," and various manoeuvres were carried



THE IMPROVED ZEPPELIN.—This view clearly shows the position of the third pair of propellers which have now been fitted to "Zeppelin III." It will be noticed that they are placed midway between the original sets and at a slightly lower level.

out on the Thursday, Friday and Saturday, but as these were all kept secret no details concerning results could be obtained. At midnight on Saturday all the balloons



THE IMPROVED ZEPPELIN.—A nearer view of the supplemental "boat" which has just been added to "Zeppelin III," showing the arrangement of the new motor and belts for driving the third set of propellers.

started off for an endurance trial, and they were severely tested owing to the adverse weather conditions, rain, fog, and cold winds making the lot of the passengers anything



but enviable. All returned to their sheds safely, and "Parseval III" had the best record, having remained aloft for fourteen hours. "Gross II" was second with 11 hrs. 20 mins. to her credit, "Parseval" taking the next place with 10 hours, while the "Zeppelin" landed after cruising for only 8 hours.

### Italian Military Dirigible Mishap.

LAST Sunday a long journey was undertaken by the Italian military dirigible, which successfully completed the round trip to Naples and back, a distance of 300 miles. It started from Bracciano but landed at Rome, and when commencing to return to its starting point, in the early hours of Monday morning, an unfortunate mishap occurred. A large crowd had gathered to watch the proceedings, and in endeavouring to keep them back Lieut. Rosetti was struck by a blade of the propeller.

⊗ ⊗

## CORRESPONDENCE.

\* \* The name and address of the writer (not necessarily for publication) MUST in all cases accompany letters intended for insertion, or containing queries.

### A 4-LB. ENGINE WANTED.

To the Editor of FLIGHT.

SIR,—I should be much obliged if you could tell, through your paper, whether it is possible to obtain a petrol or steam engine, weighing about 4 lbs., that would drive a 10-in. Cochrane propeller at about 1,200 r.p.m.

Baker Street.

Yours truly,  
H. JERRARD.

### BRITISH FLIGHT GROUNDS.

To the Editor of FLIGHT.

SIR,—Having noticed the letter in your last issue re "British Flying Grounds," I have been surprised that no one has ever mentioned Stinchcombe Hill, lying between Stinchcombe and Dursley (where the celebrated Pederson bicycle is made). Here is tableland which I should take to be over three miles in circumference, practically flat, without trees or fences; and you may be on this hill day after day and find yourself quite alone, excepting, perhaps, Saturday or Sunday afternoons.

Sparkbrook.

Faithfully yours,  
ESAU MABBETT.

### PRACTICAL AND EFFICIENT PROPELLERS.

To the Editor of FLIGHT.

SIR,—With reference to the present and useful trend towards contests for the most practical and efficient propeller for aviation, will you be good enough to publish the fact that I have constructed two screws, 8 ft. 3 ins. and 10 ft. 6 ins. diameter respectively, which I hope to test on the full-sized monoplane I am building, the explanatory model having been exhibited at Olympia under the auspices of the Aero Club. These screws are designed in variance to prevalent rigid types on the laws advocated by Prof. Pelligrew, Kress, and Vogt, who advocate this principle on the fundamental lessons demonstrated in the natural volant kingdom, whereby it is shown that Nature's screws are of a plastic nature, graduating in formation from the shoulder to the tip, and of exceedingly light weight. Consequently, no matter at what speed they are driven, they accommodate themselves automatically to all air pressures, whilst their strength is enormous. It follows, then, that screws designed in accordance are true revolving wings—Vogt terms them revolving sails—and since the natural wing or a carefully constructed prototype has immense elevating and propulsive properties, there is no reason why the flexible type of screw should not enjoy advantages or even excel over the rigid screw.

Should any of your readers care to test either of the above screws in fair competition against any rigid screw by power if available from 1-h.p. to 50-h.p., I think that the advantages mentioned above will be clearly demonstrated, even though my screws have not had the exhaustive tests of their rivals. In a nutshell I claim (1) lightness, (2) strength, (3) safety, (4) equal efficiency to rigid screws of same diameter, (5) cheapness. I shall be happy to show any bona-fide reader these propellers by appointment.

Pimlico.

I am, Sir, yours faithfully,  
EDGAR E. WILSON.

He was immediately conveyed in a motor car to the hospital, but succumbed to his injuries on the way there.

### "Espana" on Trial.

HAVING completed her official trials to the satisfaction of the Spanish Military Authorities, the dirigible "Espana," which has been built by MM. Lebaudy Frères, was handed over on Tuesday last. The first trial was carried out on that day and consisted of a five hours' run. Leaving Beauval at ten o'clock, the vessel was headed for Paris, over which it passed, and then went on to Courbevoie, Poissy and Mantes. At the last place, the Cathedral spire provided the turning point before commencing the return journey. The shed at Beauval was safely reached after the dirigible had been in the air for 5 hrs. 10 mins., during which time 175 miles had been covered.

⊗ ⊗

## TERMS IN FLIGHT.

To the Editor of FLIGHT.

SIR,—I think there is a good deal to be said in support of Mr. Osborn Smith's suggestion that nautical terms should be chosen in preference to coining new words.

Flying machines have often been called airships, which word is more naturally applied than aerofoil or aeroplane, having regard to the presence of propeller, rudder, keel, hull (often boat-like), planes curved like sails, pitching, 'scending, and rolling motions, and in all probability a very good imitation of *mal-de-mer*.

Further, I believe, the rule of the road adopted is that already in maritime use, and with the inevitable advance, and the building of larger ships, and longer flights, the pilot will of necessity be a navigator, even if he be not termed a captain.

The calculations which are made in order to determine the elements of the aerial craft, are also very similar to those carried out by the naval architect.

At the same time it may be said that in addition to air-ships there may be air-buses, air-taxis, or air-houses in the same way that there are at present water-cycles and houseboats. In the description of such machines as these it is not expected that sea-going terms would be used, but on board the true ship of the air nautical phraseology cannot be out of place.

Yours faithfully,  
C. L'ESTRANGE EWEN.

Glasgow.

### OMITTED ADDRESS WANTED.

To the Editor of FLIGHT.

SIR,—We have received an application from Mr. E. R. Gilbert for one of our aviation catalogues. He mentions having seen the advertisement in FLIGHT, but omits to give his address.

We should be obliged if you will put a note in your valuable paper requesting him to send us his address. The postcard was posted at Rugby.

We remain, yours faithfully,  
III, Piccadilly, W. THE MOTOR SUPPLY CO., LTD.

### "SAVE US FROM OUR FRIENDS."

To the Editor of FLIGHT.

SIR,—I read with much interest and amusement your leading article on the above title directed, as usual, against myself.

I wish to say, in answer to it as a comment and in fairness to myself, that I am delighted to think that what little I have done to help this cause has apparently (judging from your article) had the desired effect of directing your policy into looking more seriously into the serious side rather than the ridiculous.

Your paper, as a whole, is a credit to you, but it is marred by the fact that you allow yourself to wander and attack individuals, which cannot be of any interest whatever (even to your most ardent supporters); and finally I may add that whatever you may say, do, or think, it will not deter me one iota from doing what I think right in trying to place this country in aerial science equal, if not ahead, of every other in the world.

Yours truly,  
W. J. WINDHAM.

[If anything could be needed to prove to the average thinking man and woman that our remarks of a couple of weeks ago concerning the part which is being played by Mr. Windham are only

too fully justified, that proof is, we venture to think, amply forthcoming from the above letter. We complained of his haphazard methods, his over-impulsiveness, and his love of self-advertisement. Is not his second sentence a sample of haphazard writing? What does it all mean—particularly the “looking more seriously into the serious side”? Then, too, as regards impulsiveness, how does the “cannot be of any interest whatever” (paragraph 3) conform with the opening “I read with much interest”? Or, finally, what could well be more egotistical than his six “I’s” and three “my’s” or “me’s” (with not a single reference to the club to which *we* chiefly referred) in the fourteen lines with which he favours us.—ED.]

To the Editor of FLIGHT.

SIR,—The letter in your last issue from “A Member of the Aeroplane Club of Great Britain and Ireland” has only just come to my notice. It is evident that your correspondent is ashamed, and very rightly so, of the unjustifiable and unusual attack which he makes, since he prefers to withhold his name from publication.

It is not my intention to waste time, and possibly your space, in offending the dictates of good taste by replying in the same acrimonious manner. Abuse and insinuation are in all cases undesirable; but, perhaps, for the benefit of your readers, and in the interests of fair play, you will permit me to request your correspondent to show that members of other aeronautical clubs and associations, whose subscription is considerably greater, receive greater benefits, or even value as good, for their fees. Communications, which, as Secretary, it has been my privilege to receive from members of this Club (who are also members of other bodies), do not in any way support the views expressed by your correspondent.

Also, how is it that he has not sought redress by communicating with the Club's officials before resorting to “mud-slinging” in the Press?

Yours faithfully,

ALFRED B. E. CHEESEMAN,  
Secretary of the Aeroplane Club.

## WORKING DRAWINGS WANTED.

To the Editor of FLIGHT.

SIR,—Will you kindly put me in touch with a firm who sell working drawings of Bleriot, Farman, Latham, and Wright aeroplanes; also engines to fit the above, half full size; and, lastly, where could the castings (half full size) be got.

Paddington.

I remain, yours truly,

E. D. HILL.

## “ANTOINETTE FLYER.”

To the Editor of FLIGHT.

SIR,—I have to-day taken in the first copy of your paper, and am delighted with your way of putting things, and particularly with the description of the Antoinette monoplane.

I shall esteem it a very great favour if you will be so kind as to send me on whatever papers were published before this one dealing with this machine, and on receipt of which I will send you on whatever is the amount of their value.

I will also be very much obliged if you could tell me whether the Antoinette plane tapers along the front edge towards the back of the machine as well as from its back edge towards the front. To make myself perfectly clear: the total width of the plane next the chassis is about 7 ft. and on the outer edge about 5 ft. To get the narrowed edge on the outside the plane has, of course, to be taper, and what I want to know is whether the taper is all along the back edge, the front edge, or half and half on either side.

Trusting that I am not troubling you too much and thanking you in anticipation.

Belfast.

Yours faithfully,

H. G. FERGUSON.

[The taper referred to in the above letter takes place approximately to an equal extent in respect to the leading and trailing edges as shown on page 663 in the plan of the Antoinette monoplane.—ED.]

## STARTING MODEL FLYERS.

To the Editor of FLIGHT.

SIR,—Mr. C. E., of Glasgow, writes in your issue, No. 43, asking if any model flyers have yet been made which will rise from the ground without external assistance.

I beg to say that my “Paulhan type Langley” model completely meets this requirement, provided the ground is sufficiently level; for instance, on a macadamised road. It generally leaves the ground after four or five metres. It has been built by Mr. Paulhan himself, on Prof. Langley's, of the Smithsonian Institution, plans.

I remain, dear Sir, yours truly,

Paris.

CH. HOUY.

## PUBLICATIONS RECEIVED.

*Vorreiter Kritik der Drachensflieger.* By Ansbert Vorreiter. Berlin: R. C. Schmidt and Co. London: D. Nutt.

*Ordnance Survey Maps.* Sheet 34: London. Scale 2 miles to 1 inch. London: T. Fisher Unwin. Price, paper 1s. 6d., linen 2s. 6d.

## NEW COMPANIES REGISTERED.

**Liverpool Motor Car and Aviation Co., Ltd.**—Capital £1,000, in £1 shares. Formed to acquire the business carried on by Frances E. Taylor at Penny Lane, Wavertree, Liverpool, as the Grove Motor Car Co.

**Nicholson Aeroplane Syndicate, Ltd.**—Capital £1,500, in £1 shares (300 founders'). Formed to acquire from A. H. Nicholson the benefit of a certain invention for improvements in flying machines.

## Aeronautical Patents Published.

Applied for in 1908.

Published November 4th, 1909.

- 21,952. W. BRITAIN. Flying machines.
- 23,347. A. A. HOLLE. Aeroplanes.
- 23,595. W. FRIESE-GREENE. Airships, aeroplanes, &c.
- 28,273. SIR C. S. FORBES. Aeroplanes and other like aerial machines.

Applied for in 1909.

Published November 4th, 1909.

- 10,098. R. ESNAULT-PELTERIE. Helical propellers.
- 15,951. H. C. CALLAWAY. Aerial navigation apparatus.
- 19,540. J. MEANS. Emergency control for flying machines.

## BACK NUMBERS OF “FLIGHT.”

SEVERAL back numbers are now becoming **very scarce**, and when exhausted no more complete sets will be procurable.

The publishers have pleasure in announcing that they have secured a few of these back issues of FLIGHT, and any of our new readers who may wish for sets, No. 1 to date, except Nos. 2, 3, 4, 6, 10, 12, 15, and 16, but including the numbers containing full description and Scale Drawings of the Bleriot, Curtiss, Voisin, and Cody biplanes, the Wright full-size glider, and of Santos Dumont's “Demoiselle” monoplane; can obtain same for 6s. 7d., post free (abroad 8s. 1d.).

Complete sets to date, including all the above and in addition the scarce higher-price numbers: Nos. 2, 1s. 6d.; 3, 3s.; 6, 1s.; 10, 1s.; 12, 1s. 6d.; 15, 1s.; and 31 (with scale drawings of the Bleriot cross-Channel flyer, 2s.), but exclusive of Nos. 4 and 16, which are now obtainable in bound volumes only at the end of the year, and are otherwise out of print, can be obtained for 15s. 10d., post free (abroad 17s. 7d.) from the Publishers, 44, St. Martin's Lane, W.C.

The publishers have only a limited reserve stock for bound volumes at end of year. Those wishing, therefore, to ensure obtaining Volume I complete, with Index and Title Page, can book same now at the price of 25s., bound in cloth boards. Orders will be booked for these in rotation as received. *As various numbers become scarce* the price will be raised accordingly.

Bleriot Number separately, 2s.

## FLIGHT.

44, ST. MARTIN'S LANE, LONDON, W.C.

Telegraphic address: Truditur, London. Telephone: 1828 Gerrard.

## SUBSCRIPTION RATES.

FLIGHT will be forwarded, post free, to any part of the world at the following rates:—

UNITED KINGDOM.

ABROAD.

	s.	d.		s.	d.
3 Months, Post Free ...	1	8	3 Months, Post Free ...	2	6
6    ”                    ... 3	3		6    ”                    ... 5	0	
12   ”                    ... 6	6		12   ”                    ... 10	0	

Cheques and Post Office Orders should be made payable to the Proprietors of FLIGHT, 44, St. Martin's Lane, W.C., and crossed London and County Bank; otherwise no responsibility will be accepted.

Should any difficulty be experienced in procuring FLIGHT from local newsvendors, intending readers can obtain each issue direct from the Publishing Office, by forwarding remittance as above.